PENDING CLAIMS AS AMENDED

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) An apparatus for communications, comprising:

means for communicating, from a base station, with a plurality of communication devices, the communications placing a load on the base station;

means for monitoring a plurality of parameters each relating to the load on the base station; and

means for detecting an overload as a result of one of the parameters crossing a threshold for an entire period of time;

means for detecting an early time period, wherein the early time period occurs before the overload is detected; and

means for implementing a plurality of control mechanisms to reduce the load on the base station, wherein the control mechanism used to reduce the load on the base station is selected based on the type and degree of the overload on the base station, the type of application running on the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules, and wherein the plurality of control mechanisms are also implemented during the early time period.

2.   (Original) The apparatus of claim 1 wherein one of the parameters comprises receiver stability at the base station, and the overload is detected as a result of a receiver stability estimate exceeding the threshold for a period of time.

3.   (Original) The apparatus of claim 2 wherein the receiver stability estimate comprises a rise-over-thermal.

4.   (Original) The apparatus of claim 3 further comprising means for generating power control commands for each of the communication devices, and adjusting the threshold as a function of the power control commands.

5.   (Original) The apparatus of claim 4 further comprising means for monitoring the communications from each of the communication devices to detect errors, and wherein the adjustment of the threshold is further a function of the detected errors.

6.   (Currently Amended) An apparatus for communications, comprising:

means for communicating, from a base station, with a plurality of communication devices, the communications placing a load on the base station;

means for monitoring a plurality of parameters each relating to the load on the base station, wherein one of the parameters comprises receiver stability at the base station;

means for detecting an overload as a result of one of the parameters crossing a threshold, wherein the overload is detected as a result of a receiver stability estimate exceeding the threshold for a period of time;

means for detecting a second degree overload as a result of the receiver stability estimate exceeding the threshold for a second period of time longer than the first period of time;

means for detecting an early time period, wherein the early time period occurs before the overload is detected; and

means for implementing a plurality of control mechanism to reduce the load on the base station, wherein the control mechanism used to reduce the load on the base station is selected based on the type and degree of the load on the base station, the type of application running on the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules, and wherein the plurality of control mechanisms are also implemented during the early time period.

7.   (Original) The apparatus of claim 1 wherein one of the parameters comprises transmission power requirements for a base station transmitter, the transmission power requirements being derived from feedback from the communication devices.

8.   (Original) The apparatus of claim 7 wherein the transmission power requirements comprise transmission power requirements for a plurality of reverse power control (RPC) channels, each of the RPC channels being assigned to one of the communication devices.

9.   (Original) The apparatus of claim 7 wherein the overload is detected as a result of the transmission power requirements exceeding a maximum transmission power capability of the base station transmitter.

10.   (Original) The apparatus of claim 1 wherein one of the parameters comprises a number of the communication devices in communication with the base station.

11.   (Currently Amended) An apparatus for communications, comprising:

means for communicating, from a base station, with a plurality of communication devices, the communications placing a load on the base station;

means for monitoring a plurality of parameters each relating to the load on the base station;

means for detecting an overload as a result of one of the parameters crossing a threshold;

means for detecting a second type of overload as a result of a second one of the parameters crossing a second threshold;

means for detecting an early time period, wherein the early time period occurs before the overload is detected; and

means for implementing a plurality of control mechanisms to reduce the load on the base station, wherein the control mechanism used to reduce the load on the base station is selected based on the type and degree of the load on the base station, the type of application running on the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules, and wherein the plurality of control mechanisms are also implemented during the early time period.

12.   (Original) The apparatus of claim 1 further comprising means for detecting a second degree overload as a result of said one of the parameters crossing a second threshold.

13.   (Original) The apparatus of claim 1 wherein one of the parameters comprises loading on processing resources used for communication with the communication devices.

14.   (Original) The apparatus of claim 1 wherein one of the parameters comprises receiver stability at the base station, base station transmission power requirements derived from feedback from the communication devices, or loading on processing resources used for communication with the communication devices.

15.   (Original) The apparatus of claim 1 wherein one of the parameters comprises receiver stability at the base station, wherein a second one of the parameters comprises base station transmission power requirements derived from feedback from the communication devices, and wherein a third one of the parameters comprises loading on processing resources used for communication with the communication devices.

16.   (Original) The apparatus of claim 15 wherein a fourth one of the parameters comprises a number of the communication devices in communication with the base station.

17.   (Canceled)

18.   (Previously Presented) The apparatus as in claim 1, wherein one of the means for implementing a control mechanism comprises:
        means for determining idle users; and
        means for bumping service to idle users.

19.   (Currently Amended) An apparatus for communications, comprising:
        means for communicating, from a base station, with a plurality of communication devices, the communications placing a load on the base station;
        means for monitoring a plurality of parameters each relating to the load on the base station;
        means for detecting an overload as a result of one of the parameters crossing a threshold;
        means for detecting an early time period, wherein the early time period occurs before the overload is detected; and
        means for implementing a plurality of control mechanisms to reduce the load on the base station, wherein the control mechanism used to reduce the load on the base station is selected

based on the type and degree of the load on the base station, ~~the type of application running on the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules~~, and wherein the plurality of control mechanisms are also implemented during the early time period, the first control mechanism comprising:

        means for determining idle users;

        means for bumping service to idle users;

        means for determining high data users; and

        means for bumping service to high data users.

20.   (Original) The apparatus as in claim 19, wherein the means for implementing a control mechanism further comprises:

        means for determining a first group of users having transferred a first amount of data; and

        means for bumping service to the first group of users.

21.   (Currently Amended) A base station configured to support communications with a plurality of communication devices, the communications placing a load on the base station, the base station comprising:

        a processor configured to monitor a plurality of parameters each relating to the load on the base station, and to detect an overload as a result of one of the parameters crossing a threshold for an entire period of time, and to detect an early time period, wherein the early time period occurs before the overload is detected, and to reduce the load on the base station using a plurality of control mechanisms based on the type and degree of the load on the base station, ~~the type of application running on the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules~~, and wherein the plurality of control mechanisms are also implemented during the early time period.

22.   (Original) The base station of claim 21 further comprising a receiver, and wherein one of the parameters is a function of receiver stability, the processor being further configured to detect the overload as a result of a receiver stability estimate exceeding the threshold for a period of time.

23.   (Currently Amended) A base station configured to support communications with a plurality of communication devices, the communications placing a load on the base station, the base station comprising:

a receiver;

a processor configured to monitor a plurality of parameters each relating to the load on the base station, wherein one of the parameters is a function of receiver stability, and to detect an overload as a result of one of the parameters crossing a threshold, the processor being further configured to detect the overload as a result of a receiver stability estimate exceeding the threshold for a period of time, wherein the processor is further configured to detect a second degree overload as a result of the receiver capacity exceeding the threshold for a second period of time longer than the first period of time, wherein the processor is further configured to detect an early time period, wherein the early time period occurs before the overload is detected, wherein the processor is further configured to reduce the load on the base station using a plurality of control mechanisms based on the type and degree of the load on the base station, the type of application running on the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules, and wherein the plurality of control mechanisms are also implemented during the early time period.

24.   (Original) The base station of claim 22 wherein the processor is further configured to generate power control commands for each of the communication devices, and adjust the threshold as a function of the power control commands.

25.   (Original) The base station of claim 24 wherein the processor is further configured to monitor communications from the communication devices to detect errors, and wherein the adjustment of the threshold by the processor is further a function of the detected errors.

26.   (Original) The base station of claim 21 further comprising a transmitter, and wherein one of the parameters is a function of the transmission power requirements for the transmitter, the processor being further configured to derive transmission power requirements from feedback from the communication devices.

27.   (Original) The base station of claim 26 wherein the transmission power requirements comprises transmission power requirements for a plurality of reverse power control (RPC) channels, each of the RPC channels being assigned to one of the communication devices.

28.   (Original) The base station of claim 26 wherein the processor is further configured to detect the overload as a result of the transmission power requirements exceeding a maximum transmission power capability of the transmitter.

29.   (Currently Amended) A base station configured to support communications with a plurality of communication devices, the communications placing a load on the base station, the base station comprising:

      a processor configured to monitor a plurality of parameters each relating to the load on the base station, and to detect an overload as a result of one of the parameters crossing a threshold, wherein the processor is further configured to detect a second type overload as a result of a second one of the parameters crossing a second threshold, wherein the processor is further configured to detect an early time period, wherein the early time period occurs before the overload is detected, wherein the processor is further configured to reduce the load on the base station using a plurality of control mechanisms based on the type and degree of the load on the base station, the type of application running on the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules, and wherein the plurality of control mechanisms are also implemented during the early time period.

30.   (Original) The base station of claim 21 wherein the processor is further configured to detect a second degree overload as a result of the one of the parameters crossing a second threshold.

31.   (Original) The base station of claim 21 wherein the processor is further configured to support communications with the communication devices, and wherein one of the parameters is a function of loading on the processor.

32. (Currently Amended) A base station configured to support communications with a plurality of communication devices, the communications placing a load on the base station, the base station comprising:

a processor configured to monitor a plurality of parameters each relating to the load on the base station, and to detect an overload as a result of one of the parameters crossing a threshold, <u>wherein the processor is further configured to detect an early time period, wherein the early time period occurs before the overload is detected,</u> wherein the processor is further configured to reduce the load on the base station using a plurality of control mechanisms based on the type and degree of the load on the base station~~, the type of application running on the base station, the persistence of the load on the base station and one or more quality-of-service (QoS) rules~~, <u>and wherein the plurality of control mechanisms are also implemented during the early time period</u>; and

a second processor configured to support communications with the communication devices, wherein one of the parameters is a function of loading on the second processor, wherein the second processor is further configured to reduce the load on the base station using a plurality of control mechanisms based on the type and degree of the load on the base station~~, the type of application running on the base station, the persistence of the load on the base station and one or more quality-of-service (QoS) rules~~.

33. (Original) The base station of claim 21 further comprising a receiver and transmitter, and wherein the processor is further configured to support communications with the communication devices, and wherein one of the parameters is a function of receiver stability, transmission power requirements for the transmitter, or loading on the processor.

34. (Currently Amended) A base station configured to support communications with a plurality of communication devices, the communications placing a load on the base station, the base station comprising:

a processor configured to monitor a plurality of parameters each relating to the load on the base station, and to detect an overload as a result of one of the parameters crossing a threshold, <u>wherein the processor is further configured to detect an early time period, wherein the</u>

early time period occurs before the overload is detected, and to reduce the load on the base station using a plurality of control mechanisms based on the type and degree of the load on the base station, the type of application running on the base station, ~~the persistence of the load on the base station and one or more quality of service (QoS) rules~~, and wherein the plurality of control mechanisms are also implemented during the early time period; and

a receiver, transmitter, and second processor configured to support communications with the communication devices, wherein one of the parameters is a function of receiver stability, transmission power requirements for the transmitter, or loading on the second processor.

35. (Original) The base station of claim 21 further comprising a receiver and transmitter, and wherein the processor is further configured to support communications with the communication devices, and wherein one of the parameters is a function of receiver stability, a second one of the parameters is a function of transmission power requirements for the transmitter, and a third one of the parameters is a function of loading on the processor.

36. (Original) The base station of claim 35 wherein a fourth one of the parameters is a function of the number of communication devices in communication with the base station.

37. (Currently Amended) A base station configured to support communications with a plurality of communication devices, the communications placing a load on the base station, the base station comprising:

a processor configured to monitor a plurality of parameters each relating to the load on the base station, and to detect an overload as a result of one of the parameters crossing a threshold, wherein the processor is further configured to detect an early time period, wherein the early time period occurs before the overload is detected, and to reduce the load on the base station using a plurality of control mechanisms based on the type and degree of the load on the base station, ~~the type of application running on the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules~~, and wherein the plurality of control mechanisms are also implemented during the early time period; and

a receiver, transmitter, and second processor configured to support communications with the communication devices, wherein one of the parameters is a function of receiver stability, a second one of the parameters is a function of transmission power requirements for the transmitter, and a third one of the parameters is a function of loading on the second processor.

38.   (Original) The base station of claim 37 wherein a fourth one of the parameters is a function of the number of communication devices in communication with the base station.

39.   (Currently Amended) A method for communications, comprising:

communicating, from a base station, with a plurality of communication devices, the communications placing a load on the base station;

monitoring a plurality of parameters each relating to the load on the base station;

detecting an overload as a result of one of the parameters crossing a threshold for an entire period of time;

detecting an early time period, wherein the early time period occurs before the overload is detected; and

reducing the load on the base station using a plurality of control mechanisms based on the type and degree of the load on the base station, the type of application running on the base station, the persistence of the load on the base station and one or more quality of service (QoS) rules, and wherein the plurality of control mechanisms are also implemented during the early time period.